

## CLAIMS

What is claimed is:

1. An injection molding machine, comprising:  
at least one actuating drive constructed in the form of a spindle drive having an electric motor; and  
a dual energy storage device operatively connected with the spindle drive and constructed to apply to the spindle drive a first force and to apply to the spindle drive an opposing second force,  
wherein the energy storage device is loaded, as the spindle drive moves to a first end position, and unloaded, as the spindle drive moves in opposite direction to a second end position, said unloading of the energy storage device boosting power of the electric motor, wherein the first force is equal to the second force at an equilibrium location of the spindle drive distal from the end positions.
2. The injection molding machine of claim 1, wherein the dual energy storage device includes a first compression spring arrangement and a second compression spring arrangement, which acts in opposition to the compression spring of the first compression spring arrangement.

3. The injection molding machine of claim 2, wherein at least one the compression spring arrangements is implemented as a disk spring assembly.
4. The injection molding machine of claim 1, wherein the electric motor has a rotor and the spindle drive has a spindle nut connected to the rotor and a housing having a housing portion for support of the electric motor, and further comprising a variable force coupling mechanism operating in parallel with the dual energy storage device and disposed between one member of the group selected of the rotor and the spindle nut, and the housing portion.
5. The injection molding machine of claim 4, wherein the force coupling mechanism includes an impulse-controlled releasable locking device for the member.
6. The injection molding machine of claim 5, wherein the spindle drive is constructed for controlling a stroke of a plasticizing unit, wherein the locking device is constructed to automatically lock, when the plasticizing unit reaches its end positions.

7. The injection molding machine of claim 1, and further comprising an ejector for ejecting an injection-molded article, wherein the spindle drive is constructed for pulsating actuation of the ejector, wherein the equilibrium location is approximately at a center point of oscillation of the ejector.
8. The injection molding machine of claim 7, wherein the spindle drive is constructed for selective locking of a retracted position of the ejector.
9. The injection molding machine of claim 7, wherein the electric motor has an excitation frequency which is tuned to a characteristic frequency of an oscillating system that includes the dual energy storage device and a moved mass.
10. The injection molding machine of claim 9, wherein the ejector includes an ejector plate and ejector rams, which are connected to the ejector plate for ejecting an injection-molded article, and wherein the spindle drive includes a spindle rod, which is connected to the ejector plate, and a spindle nut, which is connected to a rotor of the electric motor, said moved mass including the ejector plate, ejector rams, spindle rod and spindle nut.
11. The injection molding machine of claim 10, wherein the spindle nut is operatively connected with the spindle rod via rolling balls.